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Yoko Imaizumi

Osaka University, Japan

BIOGRAPHY

Yoko Imaizumi has received her Doctor of Science (PhD) from Hiroshima University. Her under graduated major was Math. She worked at National Institute of Radiological Science at Division of Genetics for nine years and worked two years at Population Genetic Laboratory at University of Hawaii, USA. She worked for 27 years at National Institute of Population Studies, Ministry of Health and Welfare. She moved to Hyogo University as a Professor. She is now an Invited Professor at the Center for Twin Research, Osaka University. She has published over 100 papers in English and has been serving as an Editorial Board Member of journals for twin research and human genetics.

yoko1234go@m5.gyao.ne.jp

THE EFFECT OF BIRTH WEIGHT DISCORDANCE ON INFANT MORTALITY RATES AMONG ZYGOTIC TWINS IN JAPAN, 1995-2008

Infant mortality rates (IMRs) of monozygotic (MZ) and dizygotic (DZ) twins were estimated using vital statistics from Japan during 1995 to 2008. Using the same data, author reported that mortality risk factors were maternal ages of <20 years and gestational ages of up to 35 weeks. In the present study, 128, 236 MZ and 180, 920 DZ twins were used as denominators to compute IMRs in zygotic twins. Numbers of infant deaths were 1,858 MZ and 1,620 DZ twins. Birth weight discordance (BWD) levels were classified into seven groups from <5% to 30%≥. Fig. 1 shows the relationship between IMRs and BWD levels. The lowest IMR was 7.5 per 1000 live births at 5–9% in MZ and 6.7 at <5% in DZ twins. IMRs were significantly higher in MZ than DZ twins except two BWD levels from 5%–9% to 10–14%. The lowest IMR in MZ twins was significantly increased after 10–14%. The lowest IMR in DZ twins was 6.7 at <5% and significantly increased at 10–14% and after 25–29%. As for gestational age (GA) <28 weeks, the ratios of the highest vs the lowest IMRs were 2.2 (376.2/173.6) for MZ and 1.3 (275.2/207.2) for DZ twins. As for 28 weeks≤GA, the corresponding ratios were 13.8 (53.7/3.9) vs 9.1 (29.1/3.2) respectively. Namely, under GA 28 weeks, a risk factor of BWD was not a main factor.

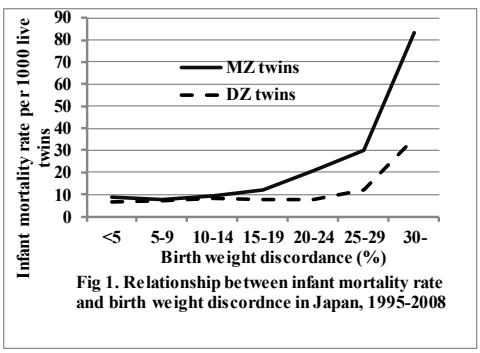

Fig 1. Relationship between infant mortality rate and birth weight discordnce in Japan, 1995-2008